

PATENT
Customer No. 22,852
Attorney Docket No. 02473.0018-00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)
)
Robin TARRY et al.) Group Art Unit: 3712
)
Application No.: 09/225,574) Examiner: B. Miller
)
Filed: January 5, 1999)
)
For: VIDEO INSTRUCTIONAL SYSTEM)
AND METHOD FOR TEACHING)
MOTOR SKILLS)

Commissioner for Patents
Washington, DC 20231

Sir:

APPEAL BRIEF UNDER 37 C.F.R. § 1.192

Appellants submit this Brief on Appeal in response to the final rejection of claims 38-54 in the final Office Action dated November 29, 2001. The Appendix contains the current state of claims 38-54. In accordance with 37 C.F.R. 1.1.92, this Brief is timely filed subsequent to a corresponding Notice of Appeal filed on May 29, 2002, accompanied with the requisite fee of \$320. If any additional fees are due, Appellants request that these fees be charged to Deposit Account No. 06-0916.

I. REAL PARTY IN INTEREST

The real party in interest is Personal Pro, LLC. as indicated by an assignment recorded on January 5, 1999, on Reel 9696 at Frame 0049.

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II. RELATED APPEALS AND INTERFERENCES

Appellants know of no other related appeals or interferences that may have a bearing on the Board's decision in the current appeal.

III. STATUS OF CLAIMS

Claims 38-54 are pending in this application. All pending claims are subject to rejection in a final Office Action. In that November 29, 2001, action, the Examiner rejected claims 38-54 under 35 U.S.C. § 102(e) as anticipated by *Brostedt et al.*, U.S. Patent No. 5,984,684. In an Advisory Action dated May 22, 2002, the Examiner refused to withdraw the final rejection.

IV. STATUS OF AMENDMENTS

Appellants submitted an Amendment After Final on March 29, 2002, proposing an amendment to claims 38 and 48. In the May, 22, 2002, Advisory Action, the Examiner indicated that the Amendment After Final would be entered for the purposes of an appeal.

V. SUMMARY OF INVENTION

To improve their performance, students often review videos of themselves performing certain activities. One conventional training system, for example, displays an integrated video image of a student performing a golf swing next to an image of a master golfer performing the same swing. That system, however, forces the student to move his head from the proper position for the swing (or other activity) to view the video image, which disrupts his natural swing.

Systems and methods consistent with the present invention instead present a combined video signal of an instructional signal overlaid onto a real-time representation of the student performing a physical activity. To do this, a video camera captures a real-time signal of the student and sends it to a splitter, which provides the real-time signal to a video mixer and to a computer. The computer analyzes the real-time signal, generates an instructional signal, and then sends that signal to the video mixer. The mixer generates a composite signal by overlaying

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the instructional signal onto the real-time representation of the student, and send the composite signal to a head mounted display (HMD) for viewing by the student.

In this manner, systems consistent with the invention present the student with a dynamic output video signal based on the real-time input video signal that provides instruction to the student in a clear and uncluttered display. Moreover, displaying the composite signal via an HMD allows the student to perform the physical activity without compromising technique or form.

VI. ISSUES

The issue on appeal is whether the rejection of claims 38-54 under 35 U.S.C. § 102(e) is proper when the applied reference fails to disclose a system or method capable of combining an instructional signal and a real-time video signal to form a composite video signal with an instructional image superimposed onto an image of the user engaged in the activity.

VII. GROUPING OF CLAIMS

All claims are in one group and stand and fall together.

VIII. ARGUMENT

A. ***Brostedt* Does Not Disclose a System or Method That Superimposes an Instructional Image Onto an Image Of One Engaged in an Activity.**

To anticipate a claim, a reference must teach all of the elements of a claim. *In re Schreiber*, 44 U.S.P.Q.2d 1429, 1431 (Fed. Cir. 1997). The absence of a single claimed element, no matter how insubstantial or obvious, is enough to negate anticipation. *See Titanium Metals Corp. of Am. V. Banner*, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Brostedt does not teach every element of the claimed invention, which defeats the rejection under 35 U.S.C. § 102(e). *Brostedt* teaches a video controller to display an image of a student side-by-side with an image of an instructor. In fact, the circuitry in *Brostedt* horizontally

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flips the video output of the camera to produce the display in Figure 7. Col. 7, ll. 8-11; col. 8, ll. 10-12.

Independent claims 38 and 48, however, recite a system and method, respectively, that include combining received signals to form a composite video signal with an instructional image superimposed onto an image of the user engaged in the activity. Because *Brostedt* fails to teach or suggest superimposing the image of the instructor onto the image of the student, that reference does not anticipate the pending claims.

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B. The Examiner Never Analyzed the Amended Claims.

In the final Office Action, the Examiner dismissed the distinctions over *Brostedt* because it gave no weight to the phrase "so that the resulting video image will superimpose an instructional image onto an image of the user engaged in the activity" in claims 38 and 48. The Examiner alleged that the phrase described the function or intended use of the claimed system and did not structurally distinguish the claimed invention over *Brostedt*.

Appellants then filed an Amendment After Final proposing to amend independent claim 38 to recite "a video controller for . . . combining the received signals to form a composite video signal with an instructional image superimposed onto an image of the user engaged in the activity." A similar amendment to method claim 48 removed the composite video image from being an intended result into a positive limitation. Although the Examiner allowed the amendment, he did not reconsider the arguments distinguishing the amended claims from *Brostedt*. Had he done so, the Examiner could not have maintained the rejection.

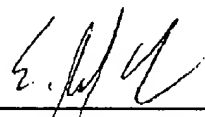
IX CONCLUSION

For the reasons given above, Appellants request that the Board of Patent Appeals and Interferences reverse the Examiner's rejection of claims 38-54 under 35 U.S.C. § 102(e).

Respectfully submitted,

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Dated: July 29, 2002

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APPENDIX TO APPEAL BRIEF**CLAIMS ON APPEAL**

38. A system for providing real-time instructional feedback of a user engaged in an activity comprising:

a video camera forming a real-time video signal of the user engaged in the activity;

a processor generating an instructional signal;

a video controller for receiving the instructional signal and the real-time video signal and combining the received signals to form a composite video signal with an instructional image superimposed onto an image of the user engaged in the activity; and

a first display device displaying the composite video signal to the user in a manner that allows the user to perform the activity while viewing the displayed signal.

39. The system of claim 38, wherein the first display device includes a head-mounted display.

40. The system of claim 38, further including a second display device, coupled to the video controller, for displaying an annotated video signal; and

wherein the video controller includes circuitry for generating the annotated video signal from the real-time video signal.

41. The system of claim 40, wherein the video controller includes a signal splitter.

42. The system of claim 38 wherein the video controller includes a video mixer for superimposing the instructional signal with the real-time video signal.

43. The system of claim 38, further including an audio output; and

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wherein the video controller also includes circuitry for generating an aural signal for the audio output.

44. The system of claim 43, wherein the audio output includes earphones.

45. The system of claim 44, further including a microphone, coupled to the video controller, for generating an electrical signal representing an audio signal; and wherein the video controller generates the aural signal from the audio signal.

46. The system of claim 38, wherein the processor includes a personal computer.

47. The system of claim 38, wherein the processor includes means for receiving an instructional input generated at a site remote from the user; and means for converting the instructional input into the instructional signal.

48. A method for providing real-time instructional feedback of a user engaged in an activity comprising:

forming a real-time video signal of the user engaged in the activity;

generating an instructional signal;

combining the instructional signal and the real-time video signal to form a composite video signal with an instructional image superimposed onto an image of the user engaged in the activity; and

displaying the composite video signal to the user on a first display device in a manner that allows the user to perform the activity while viewing the displayed signal.

49. The method of claim 48, wherein displaying includes displaying the composite video signal on a head-mounted display.

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50. The method of claim 48, further including
displaying an annotated video signal, generated from the real-time video signal, on a
second display device.

51. The method of claim 48, further including
superimposing the instructional signal with the real-time video signal.

52. The method of claim 48, further including
generating an aural signal.

53. The method of claim 52, further including
generating an electrical signal representing an audio signal; and
generating the aural signal from the audio signal.

54. The method of claim 48, further including
receiving an instructional input generated at a site remote from the user; and
converting the instructional input into the instructional signal.

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